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Value-Creation, Experiments, And Why IT Does Matter

An interview with Michael Schrage

“To heck with what the technology can do” says Michael Schrage, of the MIT Center for Digital Business. Great managers, he says, first think about what kind of value they want to create and then consider how IT can help them create it.

Too often, information technology gets a bum rap, says Michael Schrage. How companies think about it, manage it, and ultimately use IT is hampered by what he calls its reputation as a “back office, report generating, analytical function”—the whole, IT-as-commoditized-infrastructure point of view.

Schrage, a research fellow at the MIT Center for Digital Business and a visiting fellow at the Imperial College Business School’s Innovation and Entrepreneurship program in London, is sufficiently cynical, he says, to argue that the birth of the CIO “wasn’t because people said, ‘Ooh, this is a neat resource, we need to have somebody in charge of that.’ It was because information technology was bloody expensive and companies wanted somebody in charge of this huge investment, to make sure that, quote unquote, ‘it worked.’”

But simply expecting IT to work misses the point. Not enough companies, Schrage argues, work backwards from the value they want to create. They need to understand that, thanks to IT, the cost of experimenting in every theater has collapsed, and that this presents a huge competitive opportunity. He spoke with MIT Sloan Management Review’s editor-in-chief Michael S. Hopkins.

You’ve got strong feelings about what executives should be paying attention to—but aren’t—when it comes to information technology.

The first most important thing that executives need to understand about IT is that it’s not a commodity. If you think IT is a commodity, get out of business. That’s like saying people are a commodity, or talent is a commodity, or capital is a commodity.

There’s a wonderful line from Warren

Buffett, “Price is what you pay, value is what you get.” People who think that IT is a commodity, they’re looking at the price, which, yeah, gets cheaper and cheaper every year. But unless you’re clever, you’re going to get less and less. You’re going to pay less but you’ll get less. Good managers get good value from IT, but great managers get great value.

The Leading Question

How can managers turn IT into something more than infrastructure?

Findings

- * Have value conversations. Reverse engineer from the impact you want to have.

- * Recognize that the cost of experimentation has collapsed.

- * Get out of your comfort zone. “MBA grads love to analyze data, but technologies that run multi-variant regression analysis can also run complicated experiments.”

The other thing to understand about information technology is that it is a misnomer. The biggest impact of IT is not on information management, it's on people management, it's on relationships management, it's on process management, it's on systems management.

Hasn't that always been true, to some extent?

No. What's really changed is that in the 1980s, Moore's law was kind of like a joke or an aspiration, that there would be exponential improvements in these doohickeys called microprocessors and memory chips. But the reality is that there's been no technology in the history of the world before this that gives you ten times improvement every 18 to 24 months. And it's better than that. You don't just get a processing cycle improvement or a gigahertz or megahertz or terahertz improvement, but the software that runs the stuff gives you more and more value. It's a quantitative difference that makes a qualitative difference.

In a dynamic, competitive environment, you need to be constantly looking for differentiation, value-added, cost-effective segmentation, ways to define your brand to add value, things that transform the user experience. The next step really has to be to ask, "What are the media, what are the tools, what are the technologies, what are the resources for differentiating in that way?"

Unfortunately, because IT had a reputation for decades as a back office, report generating, analytical function that gathered up all the data and two or three weeks later gave you the meaningful reports for finance and what have you, the technology leapt dramatically ahead of the way it was managed in most organizations.

When you're talking to CEOs or executives, making the argument that they're overlooking IT's ability to create value, what do you tell them?

One of the real issues that emerges is that the "I" in "CIO" doesn't stand for "information," it stands for "infrastructure." There are a lot of C-level executives who want to treat IT as an infrastructure technology, like lights, like building, like facilities. You know, you flick the switch, the light goes on, you flick the switch on the computer, the computer goes on. It's a taken-for-granted issue.

But it's not enough for IT to work. It has to work to create value, not just to better manage existing resources. And very few people are having value conversations. They're having conversations about what the technology can do. But to heck with what the technology can do.

Businesses should treat technology like a special effect. If you're James Cameron and you're doing a movie like "Avatar," the issue is, "What kind of world am I trying to create? What kind of special effect do I want that will blow people away?" And then the question

is, “So how do I get the technology to do that?” The leading question is not, “Gee, how do I make a cheaper movie faster?”

So how do executives know what’s newly possible?

Well, I have not run into an executive who is not capable of getting up to date in less than a couple of hours on something that really matters. The irony of all of this is that 90 percent of the executives I’m dealing with have children who are getting more value for less money from the technology they use. I don’t mean this like the cliché that executives should look to teenagers to understand technology, but I’m saying that you’re not required to think about things in terms of technology. It requires you to reverse engineer from the impact you want to have rather than extend from the processes that you’re currently using.

Can you give us a concrete example of a company that is thinking about technology in the right way.

Yes, the UK supermarket, Tesco. Tesco has three rules in regard to rolling out new processes for inside their stores. The process has to be better for customers—no big shock there. It has to be cheaper for Tesco—again, no big shock. But it also has to be simpler for staff.

That third thing is the kicker. The real challenge for IT is not, “How do we get stuff to work?” it’s, “How do we get stuff to work easily and conveniently?” Tesco has people working for it that not only didn’t graduate from college, they dropped out of high school. How do you design digital tools to support high school dropouts?

So one thing it does is count the number of people coming into the store. When a certain threshold is hit, based on time of day, they open up another till, another cash register. They use algorithms and simple rules to strike a good balance between the number of people in the store and the thing we all hate, the wait time in the queue to checkout.

Tesco uses simple rules, simple technologies. There are ways of making complex technologies more accessible—cash registers, swipes, all these things that we know about. But again, it should come back to what you’re essentially trying to do. The designed focus is, we want to make it easy for people to shop. Easy for them to come in, easy for them to stay, and easier for them to leave. Minimize frustration. Because even if we’re selling the same stuff as Sainsbury’s, if they have to wait five minutes in line there and only 30 seconds at Tesco, we minimize the frustration. Heck, they may even pay a slight premium because they don’t waste their time. Nice, simple, easy example. It’s a meaningless thing to discuss without the technology but the technology isn’t valuable unless you discuss what kind of impact you want to have on customers.

And it’s easier for Tesco or companies like it to experiment with things like this today?

Definitely. One of the biggest differences between digital technologies now and 10, 15 years ago is that before, if you attempted an experiment on a factory floor or in a store, it cost you a lot of money. It was expensive, and you couldn't afford to fail. It really took courage to do and if it failed, you looked bad. Now, doing experimentation with digital media is so much easier and cheaper. The cost of exploration has collapsed. Every customer has a cell phone, for instance. Twenty years ago, what portion of the people coming into a store or a shopping mall had personal media? Ten percent? The pervasiveness of even just cell phones has made it cheaper and easier for companies to be innovative.

Do companies adequately understand that the cost of experiment has collapsed?

Absolutely not.

Why not?

I guess if I had to pick a phrase to describe the work that I do, it would be, "the behavioral economics of innovation." The problem with people who come out of excellent MBA programs is that they're really, really, really smart people. They love to analyze data, they love to analyze information. And they would rather analyze data and information than do a simple experiment. But the same technologies that allow you to do multi-variant regression analysis allow you to do simple, and even more complicated, experiments on a factory floor, in a store, in a classroom, in the street, in a mall, in a car. It's really fantastic.

But people have been trained not to do experiments in business school. They've been trained to study cases and perform calculations. We've been trained to ignore, oftentimes, the single most valuable thing these technologies can do for us in the workplace and in the marketplace.

I imagine that the first thing an executive wants to understand when presented with new information from somebody like you is insight about what they're going to confront—either by way of threats or opportunities. What do you tell them?

I have to put a slight twist on what you're asking. When I deal with executives, they are much less interested in the future than in how much the future will cost. The first question executives ask me is, "How much?" Like, "There's this thing called Facebook; how much?" Or, "There's this thing called SAP or Oracle Financials; how much?" They want to understand the hard dollar costs and, because of bitter experience, the soft dollar costs of training people and assimilating it into the organization.

But here's where I begin. I ask, without exception, "Who are your best customers?" and then we talk about, what "best" means. Greatest revenue, greatest margins, the customers they learned the most from? We have a segmentation conversation. I say, "Why do those

customers come to you and not your competitors? When somebody switches away from you or toward you, why? What are the reasons?"

And then we map these systems and processes in place to the sources of revenue and value for the organization. Then we flip it, and look at the best and worst suppliers. We try to create a symmetrical, holistic view of where value gets created, where value gets destroyed, where things are realized, where they are not realized. And then we start asking, "Are we getting these results because we're not smart or is there a cultural reason here? Is this because it's something we want to do and the technology won't let us? Is it something that we want to do, it's just too bloody expensive? What are the real reasons here?" And we say, "Well, gee, if we could do this, would it work?"

The key issue that I think organizations need to discuss is what are the core values that matter most to them? A lot will say "customer loyalty," but I'll say, if you're really revisiting the fundamentals of what customer loyalty means, how can you not be exploring loyalty cards? How can you not be exploring social networks like MySpace and Facebook? How can you not be exploring customer relationship management software from the supply side out and from the internet in? We live in an era where you can't live up to your core values without investing in technology.

Is all this because customers have new expectations because of the ways media and technologies have changed?

Absolutely. If I'm living in a world where I used to get two letters a day and now I get 10 emails an hour, my expectations are different, my time is different. Please don't waste my time. Give me better options. Recognize the relationships I care about. I'm on Facebook, you see what kind of friends I have; I'm on Google, you see the kind of searches I do. Make me offers based on my behavior, not on what you think I might like because you happen to be selling X, Y, or Z.

You've identified the key frame here. Changing technologies changes expectations. Does that reduce your chance to add value to your business or does that increase your chance to add value to your business? I think it creates orders of magnitude opportunities to add value to your business.

Can you summarize the three things you think companies need to get good at?

The most important I would urge companies to do would be to experiment, by crafting good, business hypotheses. I can now look executives in the eye and say, "The cost of experimentation is now the same or less than the cost of analysis. You can get more value for time, more value for dollar, more value for Euro, by doing a quick experiment than from doing a sophisticated analysis. In fact, your quick experiment can make your sophisticated analysis better."

The second is to promote greater collaboration, interaction, and diversity—not politically-correct diversity, but diversity of skills and points of view.

And the third is to think more clearly about innovation. It's no longer about creating new features and functionality. We have to move away from the notion of innovation being about greater creation of choice. Instead, it's about greater value from use.

Theoretically, I would have thought that your point about innovation is something companies would have been thinking hard about for their entire existences. How you inculcate that inclination now?

It's what you incent. You have to move away from incenting engineers to give more features and functionality and ending up with bloatware to rewarding them for new stuff that people use and are happy using and will pay to use. So often, when companies sell a product or a service, they don't look at how it's used. General Motors, until it started having OnStar, it didn't care how people were driving. Barnes & Noble, when it sells a book, gets paid whether you read the book or not. But Web 2.0 companies like eBay and Google know how their networks are being used. Phone companies finally are getting around to appreciating how stuff is being used. The App Store gives you insight to how much each app is being used.

P&G, for instance, cares enormously about how people use its products and has made enormous investments in ethnography. It puts digital cameras in people's kitchens. It was expensive in 1985 to videotape somebody using Tide in the laundry. Now, people can actually send cell phone pictures and movies of how they mix their detergent. People are broadcasting their laundry behavior on YouTube! But it wouldn't matter one whit if the main thing P&G cared about was whether people bought the product. It's customer use that really matters now.

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